

Test Report

Verified code: 920217

Report No.: E20250212263201-11EN

Customer: Lumi United Technology Co., Ltd

Address: Room 801-804, Building 1, Chongwen Park, Nanshan iPark, No. 3370, Liuxian Avenue, Fuguang Community, Taoyuan Residential District, Nanshan District, Shenzhen, China

Sample Name: Presence Multi-Sensor FP300

Sample Model: PS-S04E

Receive Sample Feb.13,2025
Date:

Test Date: Feb.14,2025 ~ Jul.03,2025

Reference Document: AS/NZS 2772.2:2016/AMDT 1:2018

Test Result:  Pass

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GRG METROLOGY & TEST GROUP CO., LTD.

Issued Date: 2025-07-14

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REPORT ISSUED HISTORY

Report Version	Report No.	Description	Compile Date
1.0	E20250212263201-11EN	Original Issue	2025-07-11

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1 GENERAL DESCRIPTION OF EUT

1.1 APPLICANT INFORMATION

Name: Lumi United Technology Co., Ltd
Room 801-804, Building 1, Chongwen Park, Nanshan iPark, No. 3370, Liuxian Avenue, Fuguang Community, Taoyuan Residential District, Nanshan District, Shenzhen, China

1.2 MANUFACTURER

Name: Lumi United Technology Co., Ltd
Room 801-804, Building 1, Chongwen Park, Nanshan iPark, No. 3370, Liuxian Avenue, Fuguang Community, Taoyuan Residential District, Nanshan District, Shenzhen, China

1.3 BASIC DESCRIPTION OF EUT

Product Name: Presence Multi-Sensor FP300

Product Model: PS-S04E

Trade Name: Aqara

Additional Model: PS-S04D

Model difference descriptions: They have the same technical construction including circuit diagram, PCB LAYOUT, hardware version and software version identical, except sales area and packaging are different.

Power Supply: 3.0V DC supplied by button cell

Battery Specification: CR2450*2 Batteries

Frequency Band: ZigBee: 2405MHz-2480MHz
Thread: 2405MHz-2480MHz
BLE_1M & 2M: 2402MHz - 2480MHz
Radar: 57GHz - 61.56GHz

Antenna Type: ZigBee: Internal antenna with 1.0dBi (Max.)
Thread: Internal antenna with 1.0dBi (Max.)
BLE_1M & 2M: Internal antenna with 1.0dBi (Max.)
Radar: AiP Antenna with 7.39dBi Gain(Max.)

Temperature Range: 0 °C ~ 40 °C

Hardware Version: 1.0.0.0

Software Version: 1.0.0.0

Sample submitting way: Provided by customer Sampling

Sample No: E20250212263201-0001, E20250212263201-0002

Note: The EUT antenna gain is provided by the applicant. This report is made solely on the basis of such data and/or information. We accept no responsibility for the authenticity and completeness of the above data and information and the validity of the results and/or conclusions. The test model is PS-S04E.

2 LABORATORY AND ACCREDITATIONS

2.1 LABORATORY

The tests & measurements refer to this report were performed by Shenzhen EMC Laboratory of GRG METROLOGY & TEST GROUP CO., LTD.

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3 TECHNICAL REQUIREMENTS SPECIFICATION

3.1 RF EXPOSURE EVALUATION

For frequency range 2GHz to 300GHz equivalent plane wave power flux density S_{eq} limit is 10 W/m²

3.2 EVALUATION RESULTS

Mode	Antenna	EIRP Power (dBm)	Power Density (W/m ²)	Limit of Power Density (W/m ²)
ZigBee	Ant 1	9.09	0.0161	10
Thread	Ant 1	8.22	0.0132	10
BLE	Ant 1	9.08	0.0161	10
Radar	Ant 2	17.70	0.1172	10

Note:

1. The Maximum EIRP Level please refer to RF report (Report NO.: E20240725192701-8EN, E20240725192701-9EN, E20240725192701-10EN), RCMSZ2025-0003-RF Original release. The Thread & ZigBee can't simultaneously transmit.

2. The field calculation does not take into account the antenna size, which is assumed to be a point source. An ideal isotropic antenna is used as a reference to compare the performance of practical antennas: P watts is radiated, from a point, uniformly over the surface of sphere of radius R . Assumed use distance from EUT to Human, **20 cm** separation distance warning is required.

The Formula

$$S = \frac{P}{4\pi R^2}$$

Whereas,

S = power density

R =distance from observation point to the antenna (m)

P = The maximum e.i.r.p of the transmitter (W)

In this section, the power density at 20 cm location is calculated to examine if it is lower than the limit.

Maximum Simultaneous transmission MPE Ratio for Thread, BLE, Radar:

Maximum MPE ratio BLE	Maximum MPE ratio Thread	Maximum MPE ratio Radar	\sum MPEratios	Limit	Results
0.0016	0.0013	0.0117	0.0146	1.000	Pass

Maximum Simultaneous transmission MPE Ratio for ZigBee, BLE, Radar:

Maximum MPE ratio BLE	Maximum MPE ratio ZigBee	Maximum MPE ratio Radar	Σ MPEratios	Limit	Results
0.0016	0.0016	0.0117	0.0149	1.000	Pass

4 APPENDIX A:PHOTOGRAPH OF THE EUT

Please refer to the attached document E20250212263201-EUT photo.

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